

## AMENDMENTS TO THE SPECIFICATION

The specification amendments are based upon the published PCT application.

Amend the paragraph at page 15, lines 13-17 as follows:

The summation unit 110 has an output 112 that is the summation of all the beamformed input signals from the receiving elements 102a-n. The control electronics 108 comprises a comparator 114, a processor 115, sampling devices 116a-n, typically an inductive coupling device, and analogue to digital converters (ADC) 117a-n.

Amend the paragraph at page 15, lines 19-26 as follows:

The comparator 114 has first and second inputs 118, 120 and an output 122. The first input 118 receives a portion of the signal,  $y(n)$ , from the output 122. The second input 120 receives a training signal,  $d(n)$ , that should, if the weights applied by the weighting units 104a-n are correct, correspond to the expected output from the summation unit 110. The comparator 114 generates an error function signal,  $e(n)$ , based upon the difference between the output signal  $y(n)$  and the training signal  $d(n)$  that is output to the processor 115 via the output 122.

Amend the paragraph at page 16, lines 11-22 as follows:

This algorithm reduces the error function signal,  $e(n)$ , between the signal output from the summation unit 110 and the training signal by varying the complex weighting functions applied to the weighting units 104a-n in order to vary the output signal from the summation unit 110 such that the error surface formed by the error function,  $e(n)$ , is descended in the direction of maximum gradient. An estimate of the gradient vector at each iteration is obtained from the product of the error signal and a 'snapshot' of each of the vector of signals received at the receiving elements 120a-n. The convergence time of the algorithm is sufficiently short that a near zero signal is achieved, subject to random signal noise, before the coherence time, i.e. the length of time for which the training signal is valid, of the training signal is exceeded.

Amend the paragraph at page 18, lines 28-30 as follows:

The phased array antenna 500 comprises a plurality of receiving elements 502a-n each having a respective weighting unit 504a-n associated therewith, a summation unit ~~506~~ and control electronics ~~508~~.

Amend the paragraph at page 19, lines 1-5 as follows:

The summation unit outputs a signal to the control electronics ~~508~~ that is the summation of all of the beamformed input signals from the receiving elements 502a-n. The control electronics ~~508~~ comprises a comparator 514, a processor 515, and a sampling devices 516a-n, typically an inductive coupling device.